IN THE CLAIMS:

Amend claims 1 and 36-46 and cancel claims 47-48 without prejudice or admission as shown in the following listing of claims, which replaces all previous versions and listings of claims.

1. (currently amended) A method of preparing a sample chip and observing a wall surface thereof, comprising the steps of:

a first step of etching a surrounding area of a preselected portion of a sample ~~and an area surrounding the preselected portion of the sample~~ by irradiating the sample with a focused ion beam to ~~for~~ form a sample chip having a wall surface formed with stepped portions due to differences in etching rate of materials forming the wall surface;

a second step of taking out the sample chip from the sample; and

a third step of observing the wall surface of the sample chip with a scanning probe microscope.

2. - 35. (canceled).

36. (currently amended) A method of preparing a sample chip and observing a wall surface thereof, comprising the steps of:

a first step of etching a surrounding area of a preselected portion of a sample ~~and an area surrounding the preselected portion of the sample~~ by irradiating the sample with a first focused energy beam to form a sample chip;

a second step of picking-up the sample chip from the sample;

a third step of irradiating a wall surface of the sample chip with ~~a second focused energy~~ an argon ion beam to thereby etch the wall surface; and

a fourth step of observing the etched wall surface of the sample chip using a scanning probe microscope.

37. (currently amended) A method of preparing a sample chip and observing a wall surface thereof according to claim 36; ~~wherein the second step further comprises the step of securing the sample chip to a sample chip holder after the sample chip is picked-up from the sample so that the wall surface of the sample chip etched in the third step and observed in the fourth step faces in an upward direction~~ wherein the argon ion beam is irradiated from a tangent direction of the wall surface.

38. (currently amended) A method of preparing a sample chip and observing a wall surface thereof according to claim 36; wherein the first focused energy beam is a focused ~~ion beam, and the second focused energy beam is an argon~~ ion beam.

39. (currently amended) A method of preparing a sample chip and observing a wall surface thereof according to claim 38; wherein the first step includes the step of processing the sample chip to form the wall surface having stepped portions due to differences in etching rate of materials forming ~~in~~ the wall surface of the sample chip.

40. (currently amended) A method of preparing a sample chip and observing a wall surface thereof, comprising the steps of:

a first step of etching a surrounding area of a preselected portion of a sample ~~and an area surrounding the preselected portion of the sample~~ by irradiating the sample with a first focused energy beam to form a sample chip;

a second step of taking out the sample chip from the sample;

a third step of irradiating a wall surface of the sample chip with an argon ion beam to ~~a second focused energy beam~~ thereby ~~to~~ etch the wall surface;

a fourth step of observing the etched wall surface of the sample chip using a scanning probe microscope;

a fifth step of irradiating the observed wall surface of the sample chip with the first focused energy beam to thereby to etch the observed wall surface; and

a step of repeating the third to fifth steps a preselected number of times.

41. (currently amended) A method of preparing a sample chip and observing a wall surface thereof according to claim 40; wherein the first focused energy beam is a focused ~~ion beam, and the second focused energy beam is an argon~~ ion beam.

42. (currently amended) A method of preparing a sample chip and observing a wall surface thereof according to claim 41; wherein the first step and/or the fifth step includes the step of processing the sample chip to form the wall surface having stepped portions due to differences in etching rate of materials forming ~~in~~ the wall surface of the sample chip.

43. (currently amended) A method of preparing a sample chip and observing a wall surface thereof, comprising the steps of:

a first step of etching a surrounding area of a preselected portion of a sample ~~and an area surrounding the preselected portion of the sample~~ by irradiating the sample with a first focused energy beam to form a sample chip;

a second step of taking out the sample chip from the sample;

a third step of irradiating a wall surface of the sample chip with ~~a second focused energy beam~~ an argon ion beam to thereby ~~to~~ etch the wall surface;

a fourth step of observing the etched wall surface of the sample chip using a scanning probe microscope;

a fifth step of irradiating the observed wall surface of the sample chip with the first focused energy beam to thereby to etch the observed wall surface; and

a step of repeating the fourth and fifth steps a preselected number of times.

44. (currently amended) A method according to claim 43; wherein the first focused energy beam is a focused ion beam~~, and the second focused energy beam is an argon ion beam~~.

45. (currently amended) A method of preparing a sample chip and observing a wall surface thereof according to claim 44; wherein the first step and/or the fifth step includes the step of processing the sample chip to form the wall surface having the stepped portions due to differences in etching rate of materials forming ~~in~~ the wall surface of the sample chip.

46. (currently amended) A method of preparing a sample chip and observing a wall surface thereof according to claim 43; further comprising the step of forming the sample chip with a rectangular parallelepiped shape in an asymmetric form to facilitate identification of the wall surface of the sample chip in the fourth step.

47. - 48. (canceled).